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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,351

08/03/2006

Friedhelm Schmitz

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

03/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,351	Applicant(s) SCHMITZ, FRIEDHELM	
	Examiner Tho v. Duong	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/3/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter of “a heat source”; “a boiler” and “a steam turbine” , “sub-layers” and “the first layer or the second heat second layer of the heat exchanger tube are coatings” must be shown or the feature(s) canceled from the claims 13,14 and 18. No new matter should be entered. Regarding the last claimed subject matter, applicant does not show that each layer are coatings (more than one coating).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Montgomerie et al. (GB 1,042,386). Montgomerie discloses (page 1) a condenser comprising a plurality of heat exchanger tubes having an outside surface and an inside surface that rout a cooling medium long the inside surface of the tube, wherein a first layer and a second layer of PTFE, which are capable of reducing an adhesion of the fluid, are arranged on the outside and inside surface of the tube respectively. Regarding claims 13-14, Montgomerie discloses (column 2, lines 1-53) that the layer includes a plurality of sub-layers (coatings).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie in view of R. A. Sandberg (US 2,064,036) or Keyes (US 5,219,374). Montgomerie substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the tube comprises a longitudinal welding seam on top of the tube. Either Sanberg or Keyes teach of tube (1,18 respectively) having a longitudinal welding seam (7a,30 respectively) located at an

Art Unit: 3744

upper most position of the tube cross section for a purpose of sealing the tube which is formed by bending a flat sheet of material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use either Sandberg or Keyes's teaching in the heat exchanger of Montgomerie for a purpose of sealing the tube which is formed by bending a flat sheet of material.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie and Sandberg or Keyes as applied to claims 1 and 16 above, and further in view of Brown et al. (US 5,083,606). Montgomerie in combination with Sandberg or Keyes substantially disclose all of applicant's claimed invention as discussed above except for the limitation that the heat exchanger system further comprises a heat source, a boiler, a steam turbine. Brown discloses (figures 2 and 5) a steam power heat exchanger system further comprises of a heat source (113), a boiler, and a steam turbine for a purpose of forming a complete steam power system to drive a generator to generate electricity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Brown's teaching in the combination device of Montgomerie of either Sandberg or Keyes for a purpose of forming a complete steam power to drive a generator to generate electricity.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reiss et al. (US 2003/0118843A1) discloses a protective coating for metallic tube.

Blangetti et al. (US 2004/0069466A1) discloses a condensation heat transfer device.

Ko et al. (US 2004/0035561A) discloses a heat exchanger.

Art Unit: 3744

Kowligi et al. (US 5,152,782) discloses a non-porous coated PTFE graft.

Janes (US 5,843,214) discloses a condensable vapor capture and recovery application.

Makowski et al. (US 5,558, 157) discloses an apparatus for removing microfouling from a heat exchanger.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/

Tho v Duong
Primary Examiner
Art Unit 3744

/T. v. D./
Primary Examiner, Art Unit 3744

Application/Control Number: 10/588,351
Art Unit: 3744

Page 6